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Tex Tech Industries Inc

Wednesday, January 17, 2001

US Department of Transportation Dockets
Docket Number FAA-2000-7909
400, Seventh Street SW
Room Plaza 401
Washington DC 20590

Subject: Comments on proposed rule for Improved Flammability Standards for Thermal/Acoustic Insulation Materials Used in Transport Category Airplanes.

Dear Sir or Madam:

This letter is intended to provide comment on behalf of Tex Tech Industries Inc. concerning the FAA Notice of Proposed Rule, 14 CFR Parts 25, 91, 121, 125,and 135 (Docket # FAA-2000-7090, Notice # 00-09) Titled: Improved Flammability Standards for Thermal/Acoustic Insulation Materials Used in Transport Category Airplanes.

1. Reference to Trade Names

Page # 56998 under "*Insulation Material Unit Costs and Weights*".

There are numerous references made to specific trade names for replacement materials. Replacement materials that meet the proposed burnthrough may or may not meet other requirements in order to be used in aircraft. For example, acoustic, corrosive and moisture absorption tests must also be met. **Questions:** By mentioning specific trade names rather than generic physical descriptions, does this constitute a recommendation by the FAA? Should the FAA qualify that specifically identified materials may or may not meet further stringent requirements?

2. Heat Flux Requirements of the Burnthrough Test

Tex Tech is concerned about changes in heat flux requirements for the Burnthrough Test. The change in the standard from 1.5 BTU/Ft^2/sec to 2.0 BTU/Ft^2/sec between testing calibration cycles Round Robin 1 and Round Robin 2, shows a 33% performance reduction and allows materials with less thermal protection to be used. The FAA and Tex Tech are concerned with increasing the egress time in the event of pool fires in order to save lives**. Question**: How does the FAA justify a 33% reduction in performance when materials are available from numerous vendors, including TTI, which will meet the 1.5 BTU/Ft^2/sec standard?

3. Radiant Panel Test

Page #57011 (h) *Requirements* (2) " …of the three specimens tested, only 1 specimen may have an after flame. That after flame may not exceed 3 seconds."

a) The after flame requirement of the Radiant Heat Flux Panel Test seems inconsistent and subjective. We believe the standard should describe materials as either passing or failing based on more objective criteria. Considering other ASTM standard methods it might be more practical to establish requirements calling for a specimen average with no single specimen greater than "x" number of seconds. (Our recommendation would be having a *total* of 3 seconds with no individual sample being greater than 2 seconds). It is a concern that, as written, the testing of three samples and the allowance of one to have an after burn *as much as* three seconds should constitute a "pass" of the test.

b) It is well understood that this test was developed for flooring systems and adopted for use in testing the flame propagation of films used in aircraft blanket assemblies. It is also understood that results of the test have provided good information concerning flame propagation of films that are in question. Materials that may be used in aircraft insulation could be composed of a variety of different materials from organic to inorganic, foams or fibers. The combination of film with various materials alters the reaction of the film and the propagation of flame. **Question:** What thought process was used in applying the requirements for modified flooring standard to a film standard and now to all thermal and acoustic assemblies whatever the construction?

4. Timing Devices

Page #57019 (7) *Timing Device* " A stop watch or other device, accurate to +/- 1% shall be provided to measure the time of application of the burner flame and burnthrough time."

Question: Could you please clarify the accuracy of the timing as to whether it refers to 1% of the accuracy of the timing device or 1% of the accuracy of the test result?

5. Total Cost of the Proposed Rule and Maximum Benefit

Page #57000 *Total Cost of the Proposed Rule* " The FAA estimates that 37.2 fatalities that would have occurred on airplanes of US registry would be avoided over 20 years by the proposed rule's requirement for burnthrough protection."

Question: By stating that certain numbers of people will be saved as a result of increased burnthrough protection, isn't it in the best interest of the FAA to hold the test requirements for burnthrough, as well as heat flux, as stringent as possible and relative to the performance of currently available materials?